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(54) Name of the invention: Cosmetic

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Specifications

1. Name of the Invention

Cosmetic

2. Claims

A cosmetic characterized by being comprised of one, or two or more kinds of mucopolysaccharides and an elder tree extract.

3. Detailed Description of the Invention

(Field of the Invention)

The present invention relates to a new cosmetic, more particularly a cosmetic characterized by being comprised of one, or two or more kinds of mucopolysaccharides and an elder tree extract.

The objectives of the present invention are to provide a protection effect, a moisturization effect and an irritation improvement effect on the skin, such as to prevent skin dryness and skin irritation, and add resilience and flexibility to the skin.

(Prior Art)

The keratinous layer of the skin maintains the proper moisture content with a balance of moisture supplied from in and outside the body and moisture evaporation from the skin. In general, the optimum moisture content is said to be 10 to 20%. However, if the moisture content goes to or below 10% for a person having dry skin with low sebum generation, or an imbalance occurs due to seasonal changes, etc., the skin becomes irritated, and in extreme cases, it creates cracking or chapping.

From this point of view, in order to improve the skin irritation condition, cosmetics that are comprised of a moisturizer such as glycerin, sodium pyrrolidonecarboxylate or sodium lactate have been used conventionally.

Attempts to combine mucopolysaccharides, allantoin, collagen and a variety of plant extracts, etc., in cosmetics, have been made with the goal of the effect of preventing skin irritation and curing wounds. In these cases, an elder tree extract has been used as one of the plant extracts.

(Problems to be Solved by the Invention)

However, although a moisturizer has the function of providing moisture to the keratinous layer, it is only a temporary effect and in addition, it is easily affected by the environmental conditions.

In addition, although mucopolysaccharides, allantoin, collagen and plant extracts such as from the elder tree, etc., have a superior cosmetic effect, there has been no satisfactory products available in which these ingredients have been blended individually. In addition, there has been no sufficient investigation of the blending of combinations.

(Means for Solving the Problems)

With regard to the above-mentioned problems, the present inventors have performed a diligent study and as a result, they have found that using one, or two or more kinds of mucopolysaccharides and an elder tree extract, in combination, allows a synergistic increase in the protective effect against skin irritation compared to the case of being individually employed, and thus they have completed the present invention.

In other words, the present invention is characterized by blending one, or two or more kinds of mucopolysaccharides and an elder tree extract, and it is to provide a cosmetic that has superior skin protection and moisturizing effect and the effect of improving a skin irritation condition.

Examples of the mucopolysaccharides employed in the present invention are: hyaluronic acid, chondroitin-4-sulfate, chondroitin-6-sulfate, chondroitin 4,6 disulfate, dermatan sulfate, dermatan 4,6 disulfate, keratan sulfate, heparan sulfate, chitin, etc., and their salts and derivatives. Mucopolysaccharides are a type of skin element, and any of the animal derived, microorganism derived, or synthetic forms can be used. In other words, the origin, method of extraction, purification and processing method are not particularly limited.

In addition, the elder tree extract employed in the present invention is obtained through the extraction of flowers, leaves, roots stems, etc., of *sambucus sieboldiana var. miquelii*, *sambucus chinensis*, *sambucus nigra*, etc., that belong to *caprifaliaceae*. The extraction method is not particularly limited, however, examples of extracting solvents are: water; lower monohydric alcohols such as ethyl alcohol, isopropyl alcohol and butyl alcohol; liquid monohydric alcohols such as propylene glycol, butylene glycol and glycerin; lower ketones such as acetone and methylethyl ketone; and lower alkyl esters such as ethyl acetate. These can be used individually or in combination of two or more.

It is preferable to blend the above-mentioned elder tree extract that is extracted with the above-mentioned extracting solvents, in a form of a drying state or in a form dissolved in water or ethyl alcohol. In addition to water or ethyl alcohol, in the case that butylene glycol, glycerin, etc., are used as an extracting solvent, they can be blended as is without drying.

The amount of the mucopolysaccharides in the cosmetic is 0.0001 to 5.0 weight%, and preferably 0.001 to 3.0 weight% for practical purposes. The amount of the elder tree extract is in the range of 0.0001 to 10 weight%. The effect can be expected when blending both ingredients in these ranges.

The cosmetic of the present invention is characterized by blending one, or two or more mucopolysaccharides and an elder tree extract. In addition, surfactants, oil, moisturizers, ultraviolet absorbers, alcohols, chelating agents, pH adjusters, preservatives, thickeners, colorings and fragrances can be blended as required.

The cosmetic of the present invention implies, in addition to skin cosmetics such as emulsions, lotions, packs and creams, hair cosmetics such as for the protection of the scalp. It has a superior improving effect on skin irritation conditions, and is appropriate for cracks, chaps, skin after shaving, and a damaged scalp after perming.

(Examples of Embodiment)

The effect of improvement on a skin irritation condition when mucopolysaccharides and an elder tree extract are used in combination is described by using comparative examples as follows.

(Test Method)

After checking the health conditions of six, 2.5 to 3 kg female Japanese white domestic rabbits, their lower backs were shaved and used for the test. First, the skin on the back was divided into four sections, and a skin irritation state was created by applying a 2% solution of sodium lauryl sulfate for a week.

On the irritated skin, test sample solutions (1) to (3) shown in Table 1 were applied continuously for a week, and the improvement of the skin irritation was evaluated using a 4 grade evaluation of significantly effective, effective, not effective and aggravated, compared to the portions

without application. The test results are shown in Table 2. The values in Table 2 show the number of animals evaluated for the item.

[see source for numbers]

Table 1

	(1)	(2)	(3)
Chondroitin-4-sulfate			
Elder tree extract			
Purified water			

Table 2

Sample	Significantly effective	Effective	Not effective	Aggravated

As is clear from Table 2, the application in combination of mucopolysaccharides and elder tree extract provides a significant improvement effect on a skin irritation condition.

Next, the present invention is further described by referring to the examples of embodiment. These do not place any limitation on the present invention.

Table 3 shows the preparation of emulsions in Example of Embodiment (1) and Comparative Examples (1) to (3).

[see source for numbers]

Table 3

	Embodiments	Comparative Examples		
	(1)	(1)	(2)	(3)
(1) N-stearoyl-L-glutamate				
(2) Lipophilic glycerin monostearate				
(3) Cetanol				
(4) Liquid paraffin				
(5) Glycerin fatty ester				
(6) Sorbitan monooleate				
(7) Polyoxyethylene sorbitan monooleate (20E.O.)				
(8) Methyl paraben				
(9) 1,3-Butylene glycol				
(10) Sodium hydroxide				
(11) 1% carboxy vinyl polymer solution				
(12) Purified water				
(13) Chondroitin-4-sulfate				
(14) Elder tree extract				
(15) Fragrance				

(Manufacturing Method)

A. (1) to (6) are heated and dissolved.

B. (9) to (12) are blended and dissolved.

C. B is added to A and emulsified.

D. (13) to (15) are added to C and mixed to create a product.

The effect of the emulsions of Example of Embodiment (1) and Comparative Examples (1) to (3) obtained as above on the effect of improving a skin irritation condition are compared as follows.

Experiment and Results

Eighteen 20 to 40 year old females were used as subjects. A total of three groups with 6 people in each group were created to compare Example of Embodiment (1) and Comparative Examples (1) to (3).

First, 20 ml of 1% solution of sodium lauryl sulfate was filled in a glass cup (internal diameter of 4 cm, height of 1.5 cm) that was fixed on the right and left inner forearms of the subjects for 30 minutes, and then the parts were washed with running water. It was blown dry and a skin irritation was created.

Next, on one side of the inner forearms where the skin irritation was created as described above, an emulsion of Example of Embodiment (1), and Comparative Examples (1) or (2) were applied for each group, and on the other side, an emulsion of Comparative Example (3) was applied twice a day, in the morning and evening. The period used was 2 weeks during winter.

After the application period described above was completed, the effect was evaluated using the following two methods.

(1) Using an impedance meter (made by I.B.S. Corporation, Model I.B. 355), the electric conductivity of the test portion was measured. A smaller electric conductivity value indicates a worse skin irritation condition.

(Evaluation)

Compared to Comparative Example (3)

Conductivity was greater by 50% or more: Significantly effective

Conductivity was greater by 30% or more: Effective

Not much change: Not effective

Conductivity was smaller by 10% or more: Aggravated

The results are shown in Table 4

(Blanks follow.)

Table 4

Sample	Significantly effective	Effective	Not effective	Aggravated
Embodiment (1)				
Comparative Example (1)				
Ditto (2)				

(2) Distilled water was filled in glass cups (an internal diameter of 4 cm and a height of 1.5 cm) and fixed to the testing parts, and after 30 minutes, the protein, amino acid, etc., dissolved in the purified water was measured with the Lowry method. A greater measured value indicates a worse skin irritation condition.

(Evaluation)

Compared to Comparative Example (3)

Smaller by 30% or more elution volume: Significantly effective

Smaller by 10% or more elution volume: Effective

Not much change: not effective

Greater by 10% or more elution volume: Aggravated.

The results are shown in Table 5.

Table 5

Sample	Significantly effective	Effective	Not effective	Aggravated
Embodiment (1)				
Comparative Example (1)				
Ditto (2)				

As is clear from the above-mentioned results, the emulsion of Example of Embodiment (1) demonstrated a significant improvement effect on a skin irritation condition compared to the case in which mucopolysaccharides or elder tree extracts were individually applied.

Example of Embodiment (2) Pack

(Preparation)	(Weight%)
(1) Polyvinyl alcohol (43.0 cp)	10.0
(2) Polyvinyl alcohol (5.0 cp)	10.0
(3) 1,3-Butylene glycol	10.0
(4) Brucine denatured ethanol	5.3
(5) Hyaluronic acid	0.5
(6) Elder tree extract	0.5
(7) Methyl paraben	0.1
(8) Purified water	balance

(Manufacturing Method)

In accordance with the aforementioned preparation, a pack was manufactured with a normal method.

Example of Embodiment (3) Lotion

(Preparation)	(Weight%)
(1) Squalane	0.03
(2) Jojoba oil	0.04
(3) Polyoxyethylene polyoxypropylane cetylether (20E.O., 8P.O.)	0.4
(4) Monopyroglutamate monoisostearate polyoxyethylene hydrogenated castor oil	1.3
(5) Chondroitin-6-sulfate	0.001
(6) 1,3-Butylene glycol	5.0
(7) Elder tree extract	0.001
(8) Ethyl alcohol	5.0
(9) Fragrance	0.1
(10) Methyl paraben	0.1
(11) Purified water	balance

(Manufacturing)

In accordance with the aforementioned preparation, a lotion was manufactured with a normal method.

Example of Embodiment (4) Cream

(Preparation)	(Weight%)
(1) N-stearoyl-L-glutamate	1.5
(2) Cetanol	3.0
(3) Cetylpalmitate	3.0
(4) Lanoline	3.0
(5) Liquid paraffin	15.0
(6) Lipophilic glycerin monostearate	2.0
(7) Monostearate polyethylene glycol (10E.O.)	1.0
(8) 1,3-butylene glycol	15.0
(9) Sodium hydroxide	0.01
(10) Chondroitin sulfate	0.1
(11) Elder tree extract	0.01
(12) Hyaluronic acid	0.1
(13) Fragrance	0.1
(14) Preservatives	0.1
(15) Purified water	balance

(Manufacturing)

In accordance with the aforementioned preparation, a cream was manufactured with a normal method.

All of the Examples of Embodiment (2) to (4) obtained as above has superior improving effect on a skin irritation condition.

(Effect of the Invention)

As described above, the present invention is comprised of one, or two or more kinds of mucopolysaccharides and an elder tree extract so that a new cosmetic with a synergism from their effects is provided.

In other words, the present invention has a significant effect on improving a skin irritation condition compared to the past, allowing for the providing of extremely useful cosmetics with a superior effect for skin protection and moisture retention.

END

Applicant: Kobayashi Kose Corporation

Amendment (Voluntary)

July 1, 1976

To: Patent Office Commissioner

1. Indication of the case
1975 Patent application No. 218308

2. Name of the Invention
Cosmetic

3. Party of the amendment
Relation to the case: Patent applicant
Address: 3-6-2 Nihonbashi, Chuo-ku, Tokyo
Name: Kobayashi Kose Corporation

4. Date of the amendment order
Voluntary

5. Object of the amendment
The "Detailed Description of the Invention" section of the specification.

6. Details of the amendment
(1) "Effect of skin irritation" on Page 3, Line 3 of the specification is corrected to "Improving effect on a skin irritation condition."
(2) "Comparative example" in Page 6, Line 17 of the specification is corrected to "Test example."

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